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ABSTRACT

The primary purpose of this study was to determine student attitudes about their experiences in vocational agriculture one year after completing the program and to determine if their attitudes are related to their current occupational status. The population for this study consisted of all high schools in Florida with an agribusiness and natural resources program during the 1982-83 school year. Each of the 333 teachers identified through a directory of programs was asked to have each senior vocational agriculture student complete a brief questionnaire, resulting in 1,848 seniors being identified to form the accessible population. A sample of 300 students received a followup questionnaire in March 1984, with 209 (69 percent) returns. Analysis of the data provided the following conclusions: (1) the majority of the 1983 program completers in Florida were involved to some degree in an occupation related to agriculture one year after graduation; (2) program completers had not accurately predicted their post-high school occupational/educational plans; (3) overall, program completers agreed with their pre-graduation positive attitudes about their experiences in vocational agriculture; and (4) highest Future Farmers of America degree earned was a significant factor contributing to the explanation of variance in the first attitudinal factor, values of the program. Recommendations were made for further research such as followup of 1983 graduates at later dates, followup of later graduates, and studies of employer attitudes about vocational agriculture program completers. (KC)

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Relationship of 1983 Program Completer Attitudes
About Vocational Agriculture and
Their Occupational Status
One Year After Graduation

A Report of Research

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INTRODUCTION

Accountability has been an important concern in vocational education for many years. The Vocational Amendments of 1976 specifically emphasize program accountability and the need for evaluative data concerning the effectiveness of programs in delivering educational services. More recently, some states have passed specific legislation requiring programs to be accountable for expenditures. For example, Florida has recently enacted legislation that sets minimum placement and completion standards for all vocational programs (Florida Statute 229.551).

An important source of evaluative data for vocational education programs is the graduates of those programs. In addition to knowing placement and completion rates, it is important to have an understanding of student attitudes about the educational experiences they received while enrolled in vocational agriculture.

In the first phase of this study (Arrington and Price, 1983), the attitudes of high school seniors about experiences received while enrolled in vocational agriculture were determined. In addition, the study identified demographic variables that were related to senior attitudes about experiences in vocational agriculture. The primary purpose of the current study (Phase II) was to determine student attitudes about their experiences in vocational agriculture one year after completing the program and determine if their attitudes are related to their current occupational status.

OBJECTIVES OF THE STUDY

Specifically, the study was designed to:

1. Determine the current status of 1983 program completers of Florida vocational agriculture/agribusiness programs with regard to occupation, further education, economic level, and other pertinent demographic factors.
2. Compare the current occupational status of 1983 program completers with their pre-graduation occupational plans.
3. Appraise program completer attitudes about experiences in vocational agriculture and compare their attitudes with their pre-graduation opinion of vocational agriculture.
4. Determine if program completer attitudes about the value of vocational agriculture are related to their current occupational status, economic level, further education, and demographic factors.

LITERATURE REVIEW

This review was originally completed in the first phase of this study and is designed to present an overview of the literature related to student follow-up in vocational education. The first section focuses on the importance of follow-up research in vocational education, including a review of the types of follow-up research that have been conducted. Section two summarizes the findings of recent follow-up studies concerning vocational education.

Importance of Follow-up Studies

Local, state, and federal governments have traditionally funded the vocational agriculture program in secondary schools. Federal funding for vocational agricultural education began with the Smith Hughes Act of 1917.

The importance of systematic evaluation of these programs increased as educators were held accountable for funding of ever more expensive instructional programs. The United States Congress recognized the importance of evaluating vocational education programs in the Education Amendments of Public Law 94-482 (U.S. Congress, 1976). Section 112(B) of the act stated:

Each state shall evaluate by using data collected whenever possible, by statistically valid sampling techniques, each such program which purports to impart entry level skills according to the extent to which program completers or leavers: (1) find employment in occupations related to their training and, (2) are considered by their employers to be well trained and prepared for employment, except that in no case can pursuit of additional education or training by program completers or leavers be considered negative in these evaluations (p. 2187).

Evaluation of vocational education is usually based on job placement. The evaluation process, however, should consider other factors. Warmbrod (1970) wrote of a possible "practice-principle gap" in evaluation. Warmbrod stated:

Follow-up studies concerned primarily with rates of employment de-emphasize other appropriate objectives of vocational education. The objectives to which we in agricultural education subscribe specifically mention occupational orientation and exploration, continuing education and the development of human relations and leadership abilities in addition to occupational placement and advancement. Data concerning all anticipated benefits of vocational education should result from follow-up studies. (p. 299)

Warmbrod continued that "the chief concern of education, including vocational education, is the nurture and development of individuals. Then the

chief concern in evaluating the effectiveness of vocational education is an assessment of the development and change in behavior of individuals rather than measuring the monetary returns the investment yields." (p. 300)

Follow-up studies can provide information that can be used to improve classroom teaching methods. O'Reilly and Asche (1979) stated:

Follow-up data may also give teachers important feedback on the quality of their teaching performance. Such information is useful for self-improvement and as a source of self-satisfaction. Data regarding teacher effectiveness may well become increasingly important in the future. (p. 3)

They continued that the "graduates and their employers are often the first to identify areas in which recent technological change has created a need for program revision. Every vocational student has the right to up-to-date instruction that is compatible with the performance required of the job." (p. 3)

Wentling (1980), in *Evaluating Occupational Education and Training Programs*, listed a number of reasons for conducting a follow-up study. These reasons included determining: (1) the career patterns of former participants of various programs, (2) the immediate demand for positions within the community, (3) the mobility of program graduates, (4) the adequacy of the educational or training program in preparing individuals for job entry, (5) the adequacy of preparation for entry into advanced training and, (6) the adequacy of ancillary services such as guidance, counseling, and placement.

Borlich (1980) described a needs assessment model for conducting follow-up studies of teacher education and training. The model first defined

a training need by identifying "what should be" and "what is" in the knowledge, performance and consequence (reaction to behavior) competencies of trainees. The distance between these two poles was an index of the programs effectiveness in teacher training. Borlich went on to say that the model can be adapted and extended to suit other institutions and purposes. (p. 1)

Harvey and Maseman (1975) described three research designs used in follow-up studies. The first was treni design in which similar populations were sampled at different points in time, i.e. graduates from a program in 1968 and 1970 followed up five years later in 1973 and 1975. The procedure could identify changes and suggest trends but provided no explanation of changes or trends.

The second, longitudinal design provided the most complete and accurate data set. In this design data were gathered on a selected population at points in time both before and after the specific experience under study (i.e. graduation from vocational program). The third, cross sectional design, surveyed at one time a population with similar experiences at different times, i.e. classes of 1968 and 1970 both surveyed in 1975. Descriptive information on differentiation of groups was provided.

Follow-up Research in Vocational Education

Most of the follow-up studies reviewed were primarily concerned with job placement. Specific purposes of the studies and types of information gathered varied greatly. There were many factors other than employment

that were valid measures in the evaluation of vocational education programs. Morgan, Drake, and Baker (1971) stated:

...many persons not familiar with vocational programs evaluation and evaluative criteria have the misconception that a program is a poor program if it does not place every student in a job directly related to his training. Individual differences, job opportunities, perceived job status, salary differentiation, resistance to job mobility, economic conditions, discrimination and many other factors account for persons not taking jobs related to their training. Teachers and administrators have no control over most of these factors and constraints, and this must be taken into consideration when appraising programs. (p. 1)

A number of follow-up studies have sought to gather data related to the effectiveness of a vocational program beyond job placement. Chern and Pettibone (1973) described a two year follow-up study of vocational school graduates in which respondents were asked to rate the importance of various factors related to their success on the job. These factors included communication skills, counseling, preparation for getting along with others, and adjustments to an eight hour workday.

Enoch (1977) described a follow-up study of former vocational students from the Roanoke, Virginia, Public Schools in 1975 and 1976. The study sought to identify the occupational status of students. In addition, former students were asked to rate the effectiveness of the instructional program in relation to twelve aspects of employment. These included such skills as knowing how to apply for a job, understanding what goes on in a particular job, being able to learn new things on the job, getting along with people, knowing how to ask questions which helped on the job, knowing how to follow directions, and knowing about work safety.

Whether or not vocational education graduates find work in an occupation related to their field of study could be influenced by a number of factors in addition to the effectiveness of the vocational education program. McKinney (1982) identified many of these factors. Data were collected through a review of literature, analysis of existing data, case studies, and a mail questionnaire. The data indicated higher job placement in schools where administrators, counselors, and teachers believed job placement was both a purpose of vocational education programs and was a prime responsibility; admission to vocational education programs was restricted to students with high interest and potential; there was a high demand for workers in the surrounding labor market area; manufacturing was a major community industry; the community had a mix of industry sizes; needs assessment surveys were frequently used to plan and evaluate vocational education programs; teachers had regular contact with employers regarding job placement; students participated in youth organizations and acquired job readiness training and basic education skills; and the vocational education curriculum was oriented to employer needs.

In the field of vocational agriculture, most of the studies reviewed were primarily concerned with the employment status of graduates. One major follow-up study of vocational agriculture graduates was the 1978 southern regional study (Iverson and Brown, 1979). The primary purpose of this project was to determine the role of vocational agriculture programs in the occupational success of program graduates from the southern region. Through the use of both mail and telephone questionnaires, large amounts of demographic data concerning the graduates' educational experience and employment status were collected. Respondents were also asked to rate statements about their

experience in vocational agriculture/agribusiness and FFA, their teachers and the scope and function of the program. These ratings were recorded on a Likert 1 to 5 scale signifying opinions ranging from "strongly disagree" to "strongly agree".

Among the findings were that over half of the 1974 graduates entered the job market upon graduation from high school, less than one fourth took one or two years of college and only 13 percent completed a four year college program. Nearly one-half of the respondents were employed in non-agricultural occupations while 31.8 percent were in full or part-time farming or ranching and 34.7 percent were involved in other agricultural pursuits. Graduates demonstrated a high degree of support for their programs by indicating agreement with most of the positive statements designed to measure respondent attitudes towards the program.

Data from the southern region study were further analyzed in a later study to determine if categories of responses could be identified and if a significant relationship existed between the categories and the demographic variables (Iverson, Jewell, Davis and Brown, 1982). The findings of this study led the researchers to conclude that variations among states affects respondents' evaluations more than any other variable. Race, educational level, years of vocational agriculture, participation in Future Farmers of America activities and supervised occupational experience program participation also strongly affected responses. Variables found to have little influence on responses included income, occupation, and sex.

In describing a statewide follow-up system for secondary agribusiness

education trainees in Alabama, Drake (1977) stated:

Vocational education trainee follow-up studies constitute one of the most valuable techniques for assessing the outcome of Agribusiness Education programs. Not only do follow-up studies offer an excellent approach for dealing with phases of accountability, they offer an excellent vehicle for program improvement. (p. 260)

The instrument used in the Alabama study focused on obtaining information concerning the following areas: (1) first-job employment, (2) present-job employment, (3) unemployment, (4) continuing education, (5) job placement, (6) quality and benefit of program, (7) quality and benefit of instruction, (8) recruitment and orientation, and (9) need for and quality of program resources. Among the findings were that approximately 29 percent of the trainees felt they did not have adequate job or occupational information and school experiences to make a realistic career choice. Of the respondents whose first job was directly related to their training, only 3.6 percent indicated that they were poorly prepared for the job as a result of their agribusiness program. Only 5.0 percent of the respondents indicated that they would not take a vocational program again.

Little (1970), in a review of state wide follow-up studies of former vocational agriculture students, reported a decreasing percentage of graduates who enter farming as an occupation, while the number of graduates entering non-farming agricultural occupations or non-agricultural occupations was increasing.

Arrington and Price (1983) surveyed senior vocational agriculture students in Florida to determine satisfaction with the competencies developed as

a result of participating in vocational agriculture programs. In addition, the study sought to identify student, school, and program variables related to program participant satisfaction. Among the findings reported was that students were very positive about their experiences in vocational agriculture. It was also reported that only 16.5 percent of the students planned to farm or work in an agricultural related occupation after high school.

In summary, the follow-up study of program completers was seen as an important tool for evaluating vocational agriculture education programs. Most follow-up studies reviewed focused primarily on job placement or occupational status of graduates. Follow-up can also be used however, to measure other variables related to the objectives of vocational agriculture.

RESEARCH PROCEDURE

Population Investigated

The population for this study consisted of all high schools in Florida with an Agribusiness and Natural Resources Program during the 1982-83 school year. To obtain a list of all students in the population, a listing of all senior high school Agribusiness and Natural Resources teachers in Florida was obtained from the Agribusiness and Natural Resources Education Personnel Directory (1982). In November of 1982 each of the 333 teachers identified was asked to have each senior vocational agriculture student complete a brief questionnaire (Appendix A) that identified the student's name, address, phone number, and the number of years enrolled in vocational agriculture. Two follow-up contacts resulted in 310 (93%) of the 333 teachers responding. As a result, 1848 senior vocational agriculture students were identified to form the accessible population.

To accomplish the objectives of Phase II of the study, a random sample of 300 students was selected from the accessible population using a table of random numbers. The required sample size was determined to be 300 (95% confidence level) based on a recommended sample selection table (Yamane, 1967).

Instrumentation

In order to obtain requisite information, a mail questionnaire (Appendix B) was developed to obtain data from high school seniors. The questionnaire was a modification of an instrument used in Phase I of the study. A southern region follow-up study (Iverson and Brown, 1979) questionnaire formed the basis for many of the items included on the questionnaire.

The validity of the content of the instrument was established by a jury of selected staff members and graduate students in the Department of Agricultural and Extension Education and was pilot tested on a group of senior vocational agriculture students who were not included in the random sample. The information from the pilot test was used to check the clarity of instructions, appropriateness of questions, and other factors that might affect the response rate. The reliability coefficient of the questionnaire was .90.

Data Collection and Analysis

Data for the study were collected in March, 1984. Three follow-up contacts (see Appendix C) yielded 209 (69 percent) returns. There were 15 students who had moved and could not be reached. Twenty-seven randomly selected non-respondents were contacted and asked to respond to selected items on the questionnaire. An analysis of this information revealed no significant differences between respondents and non-respondents.

Descriptive statistics were utilized to accomplish the first three objectives. For the fourth objective, each of the program evaluation statements was first examined by factor analysis. Categories of evaluation statements were identified and a multiple regression analysis was utilized to examine the relationship between the categories of evaluative statements and occupational status, economic level, further education, and demographic factors.

PRESENTATION AND ANALYSIS OF DATA

This section is divided into three major sections, each of which addresses one of the four major objectives in the study. Section one presents demographic data that describe the current status of 1983 program completers. The second section compares the current occupational status of program completers with their pre-graduation occupational plans. Section three summarizes student attitudes toward their experiences in vocational agriculture. The final section summarizes data that describe variables related to program completer attitudes about the value of vocational agriculture.

Objective One

Data collected for objective one revealed that of those responding, the majority were single (97.2 percent) and still living with their parents (74.4 percent). Ninety-seven percent of the respondents were white.

Each student was asked to indicate which program(s) they had been enrolled in during their senior year. The program area with the largest enrollment was production agriculture. Table 1 illustrates that 27.2 percent of responses were in the category of production agriculture. This was closely followed by ornamental horticulture (21.2 percent) and agriculture mechanics (17.9 percent).

As for a FFA activity, table 2 illustrates less than three percent of the respondents had not been a member. Approximately 85 percent had been a member of FFA for three years or more. There were 53 (26.5 percent) students who had earned the State FFA degree. Thirty-four (17.0 percent) students had not earned at least a greenhand degree. These data are summarized in table 3.

Table 1
 SENIOR VO-AG PROGRAM ENROLLMENT
 (N=195)

Program	Number	Percentage	Cum. Percentage
Agricultural Production	105	27.2	48.4
Ornamental Horticulture	82	21.2	21.2
Agricultural Mechanics	69	17.9	66.3
Agricultural Cooperative	35	9.1	82.1
Agricultural Supplies and Services	27	7.0	89.1
Forestry/Natural Resources	26	6.7	73.0
Fundamentals of Agricultu- ral Occupations	16	4.1	96.0
Applied Principles of Agricultural Occupations	15	3.9	99.9

NOTE: Some interviewees listed enrollment in more than one program.

Table 2
YEARS OF MEMBERSHIP IN FFA
(N=205)

Year	Number	Percentage	Cum. Percentage
0	6	2.9	2.9
1	7	3.4	6.3
2	18	8.8	15.1
3	40	19.5	34.6
4	73	35.6	70.2
5	37	18.1	88.3
6	24	11.7	100.0

Table 3
HIGHEST FFA DEGREE
(N=200)

	Number	Percentage	Cum. Percentage
No Degree	34	17.0	17.0
Greenhand	37	18.5	35.5
Chapter Farmer	76	38.0	73.5
State FFA Degree	53	26.5	100.0

Table 4 illustrates that 36.3 percent were employed in a non-agricultural occupation. Slightly more than eight percent were full-time farmers or ranchers and about 14 percent said they were a part-time farmer or rancher. Approximately 29 percent of graduates were attending a college or postsecondary vocational school. Of those attending school, 28.8 percent were studying some area of agriculture. Eighteen (8.8 percent) respondents indicated they were unemployed. However, it should be noted that some of the unemployed were attending college. Over one-half (51.5 percent) of the respondents were involved to some degree with an occupation related to agriculture one year after graduation.

As far as economic status, two thirds of those who reported an income were making less than \$10,000 annually. Over 19 percent had an annual income between \$10,000 and \$14,999. Slightly over three percent indicated their annual income was over \$35,000. These data are summarized in Table 5.

Objective Two

Objective two of the study was designed to compare current occupational status with what students had indicated they planned to do after graduation. Phase I of this study revealed that only 2.6 percent of the seniors planned to be involved in farming (see Table 6). However, 22 percent of the program completers indicated they were engaged in farming on a full-time or part-time basis. There were 105 (42.6 percent) students employed in an agricultural occupation other than farming. Of those, approximately 11 percent were involved in an agribusiness occupation and the same number were involved in ornamental horticulture. Over 12 percent were involved in agricultural mechanics.

Table 4

CURRENT OCCUPATIONAL STATUS OF
1983 PROGRAM COMPLETERS
(N=204)

Occupational Categories	Number	Percent*
Farm	17	8.3
Farm	28	13.7
Agricultural Occupation	105	42.6
Non-Agricultural Occupation	74	36.3
Post-Secondary Vocational School	16	7.8
College	43	21.1
Military	11	5.4
Unemployed	18	8.8

*Percentages add up to more than 100 percent due to multiple responses.

Table 5

ANNUAL GROSS INCOME BEFORE TAXES
(N=191)

Category	Number	Percent	Cum. Percent
Less than \$5,000	58	30.4	30.4
\$5,000 - \$9,999	72	37.7	68.1
\$10,000 - \$14,999	37	19.4	87.5
\$15,000 - \$19,999	11	5.8	93.3
\$20,000 - \$24,999	6	3.1	96.4
\$25,000 - \$29,999	1	0.5	96.9
\$30,000 - \$34,999	0	0.0	96.9
over \$35,000	6	3.1	100.0

Table 6

COMPARISON OF PLANS AFTER GRADUATION
WITH ACTUAL OCCUPATIONAL STATUS

Occupational Categories	Pre-graduation Plans (N=310)		Actual Status (N=204)	
	Number	Percent	Number	Percent (1)
Farm	8	2.6	17	8.3
Farm	35	11.3	28	13.7
Agricultural Occupation	30	9.7	105	42.6
Non-Agricultural Occupation	24	7.7	74	36.3
Post-Secondary Vocational School	24	7.7	16	7.8
College	117	37.7	43	21.1
Military	42	13.5	11	5.4
Don't Know	54	17.5	*	*
Unemployed	*	*	18	8.8

(1) Percentages add up to more than 100 percent due to multiple responses.

(*) Not asked

Data summarized in table 6 also illustrates that over 45 percent of the students had indicated they planned to attend college or some other postsecondary school after graduation. However, one year after graduation, only 28.9 percent were attending school on a full-time or part-time basis.

Respondents were also asked to indicate whether or not their current job was related to their vocational training. Over one-half (55.3 percent) indicated that their present job was at least somewhat related to the vocational agriculture training. However, it should be noted that these data include those students who continued their education after high school.

Objective Three

Objective three sought to determine the attitudes of program completers about their experiences in vocational agriculture and compare post-graduation attitudes with those expressed prior to graduation. To measure program completer attitudes, each person reacted to sixteen statements related to their vocational agriculture experiences. A four-point Likert scale was utilized to categorize responses to the evaluative statements. Students could strongly agree, agree, disagree, or strongly disagree with each of the items. Frequencies, percentages, and a mean response were computed for each statement.

In general, experiences in vocational agriculture received very high ratings from the seniors (see Table 7). For the statement, "vocational agriculture taught me skills useful in production agriculture", 98.9 percent of the students either agreed or strongly agreed. In comparison, 99.4 percent had agreed or strongly agreed before graduation. When asked "would you enroll in vocational agriculture

Table 7

RATINGS OF STATEMENTS ABOUT THE VOCATIONAL AGRICULTURE PROGRAM
BY STUDENTS BEFORE AND AFTER GRADUATION

Statements About Vocational Agri- culture Experiences	Percentages of Responses				Mean Response
	Strongly Agree	Agree	Disagree	Strongly Disagree	
Taught me skills use- ful in production agriculture	34.00 50.70	65.40 47.30	0.30 1.50	0.30 0.50	3.33 (B) 3.48 (A)
Taught me skills use- ful in agribusiness and natural resources	24.80 38.50	68.60 51.20	6.40 8.30	0.30 2.00	3.18 (B) 3.26 (A)
Helped me learn how to participate in meetings	38.50 54.60	54.80 36.70	5.80 6.80	1.00 1.20	3.30 (B) 3.44 (A)
Helped me choose an occupation	21.00 22.60	52.40 36.90	25.90 34.90	0.60 5.40	2.94 (B) 2.77 (A)
Helped me develop leadership skills	38.10 48.00	54.50 44.50	7.10 6.00	0.30 1.50	3.31 (B) 3.39 (A)
Helped me understand how to enter and ad- vance in agricultu- ral occupations	29.70 31.03	63.90 52.70	5.80 13.30	0.60 2.90	3.22 (B) 3.12 (A)
Helped me to see the need to get along with others on the job	43.40 47.80	53.40 43.90	3.20 5.47	-.-- 2.90	3.40 (B) 3.37 (A)
Helped me learn to work in production agriculture areas like farming, greenhouse plant production, or nursery operations	47.10 53.66	51.00 41.95	1.90 3.90	-.-- .49	3.45 (B) 3.49 (A)

Table 7 (continued)

Statements About Vocational Agri- culture Experiences	<u>Percentages of Responses</u>				Mean Response
	Strongly Agree	Agree	Disagree	Strongly Disagree	
Helped me learn to work in agribusiness and natural resources areas like sales and services, forestry, or food processing	17.90 30.88	62.80 46.57	17.90 20.59	1.20 1.96	2.97 (B) 3.06 (A)
Helped me learn to get along with other people	36.30 44.12	61.10 50.00	2.30 4.41	.03 1.47	3.34 (B) 3.37 (A)
Vocational agricul- ture classes were good for me	46.50 68.45	51.90 30.58	1.30 .49	.30 .49	3.44 (B) 3.67 (A)
If I had to do it over I would re-enroll in vocational agriculture	53.50 77.30	43.30 19.32	2.90 2.90	.30 .48	3.50 (B) 3.73 (A)

*Coded as SA=4, A=3, D=2, and SD=1.
(B)=Before, 1983; (A)=After, 1984

if you had it to do over again", 96.6 percent of the students responded positively after graduation with 96.8 percent responding positively before graduation. There were 121 (59.6 percent) students in agreement that vocational agriculture helped them choose an occupation. Prior to graduation, 73.4 percent of the students had agreed with this statement.

As far as teacher assistance received while in vocational agriculture, 90.3 percent of the graduates indicated their teacher had provided information on careers within agriculture. Ninety-seven percent had responded to this question positively before graduation. Approximately 88 percent of the seniors had indicated that their teacher encouraged them to enter an agricultural occupation. After graduation 89.3 percent responded positively to this question. These data are summarized in Table 8.

Objective Four

Objective four was to determine if student attitudes about the value of vocational agriculture were related to their occupational status, economic level, further education, and demographic factors. Each of the sixteen program evaluation statements was examined by factor analysis. The purpose of the factor analysis was to identify categories of program evaluation statements (constructs). Variables loading .60 or higher on a factor were considered in interpreting the meaning of the factor.

Three factors were identified and are summarized in Table 9. For each factor identified, the factor loading of each questionnaire item is indicated. The three categories of response statements were identified and labeled as: (1) values of the program, (2) instructional program, and (3) career guidance.

Table 8

RATINGS OF STATEMENTS ABOUT TEACHER ASSISTANCE
BY STUDENTS BEFORE AND AFTER GRADUATION

Statements About Teacher Assistance	<u>Percentages of Responses</u>			Strongly Disagree	Mean Response
	Strongly Agree	Agree	Disagree		
Encouraged me to enter an occupation in agriculture	28.80 49.03	59.60 40.29	10.60 7.28	1.00 3.40	3.16 (B) 3.35 (A)
Encouraged me to consider attending college	27.60 50.24	49.70 31.71	22.10 13.66	.60 4.39	3.04 (B) 3.28 (A)
Provided me with information on careers outside of agriculture	15.70 28.78	58.00 40.49	25.60 22.93	.60 7.80	2.88 (B) 2.90 (A)
Provided me with information on careers within agriculture	36.90 59.64	59.90 30.72	3.20 7.23	-.-- 2.41	3.33 (B) 3.48 (A)

*Coded as SA=4, A=3, D=2, and SD=1

Table 9

RESULTS OF FACTOR ANALYSIS OF THE EVALUATIVE RESPONSES

Factor/Item Name	Factor Loading
<u>Factor 1: Values of the Program</u>	
Vo-Ag helped me develop leadership skills.	.67
Vo-Ag helped me learn to get along with others.	.66
Vo-Ag classes were good for me.	.70
If I had it to do over again, I would re-enroll in vocational agriculture.	.62
<u>Factor 2: Instructional Program</u>	
Vo-Ag taught me skills useful in agribusiness and natural resources.	.72
Vo-Ag helped me learn to work in production agriculture areas like farming, greenhouse production or nursery operations.	.60
Vo-Ag helped me learn to work in agribusiness and natural resources areas like forestry, sales and services or food processing.	.68
<u>Factor 3: Career Guidance</u>	
My teacher encouraged me to enter an occupation in agriculture.	.70
My teacher encouraged me to consider attending college.	.76
My teacher provided me with information on careers within agriculture.	.69

To determine whether the independent variables were related to the attitude factors, a step-wise multiple regression analysis was conducted. The three factors identified by factor analysis were used as dependent variables. A probability level of .05 was used to determine if each independent variable significantly contributed to the explanation of variance in each factor.

For the first factor, values of the program, one variable contributed to the variance: highest FFA degree achieved. However, this variable accounted for only a small percentage of the variance (R^2) in this factor.

For the second factor (instructional program) and the third factor (career guidance), none of the independent variables were significantly contributing to variance.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The majority of 1983 vocational agriculture program completers in Florida were involved to some degree in an occupation related to agriculture one year after graduation. When those who continued their education and those who entered the military are added, it accounted for over 70% of the program completers.
2. Program completers had not accurately predicted their post-high school occupational/educational plans.
3. Overall, program completers agreed with their pre-graduation attitudes about their experiences in vocational agriculture. Program completers again indicated very positive attitudes about their experiences.
4. Highest FFA degree earned was significantly contributing to the explanation of variance in the first attitudinal factor, values of the program.

Recommendations for Further Research

1. Additional research should examine 1983 program completers in Florida to determine their attitudes and occupational status at future points in time.
2. Other graduating classes should be examined to determine their attitudes and occupational status.
3. Similar studies should be conducted in other states to provide further comparative evaluative information on program completers in order to test the results in this study.
4. Other studies should examine employer attitudes about vocational agriculture program completers.

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APPENDIX A

SENIOR DATA FORM

APPENDIX A
SENIOR DATA FORM

Dear Vo-Ag Senior:

We need your help in obtaining an accurate list of our seniors in Vocational Agriculture throughout the state of Florida. Please provide the following information and return the form to your teacher.

Name _____ Telephone _____
Last First MI

Permanent Address _____

How many years have you been enrolled in Vo-Ag including this year? 1 2 3 4 5
(Circle the correct one)

Thank you for your cooperation!

APPENDIX B

QUESTIONNAIRE

FOLLOW-UP SURVEY OF FORMER VOCATIONAL
AGRICULTURE/AGRIBUSINESS STUDENTS

Instructions: Please read each statement below and respond as indicated. Your individual answers will be kept confidential.

1. In what agriculture program(s) were you enrolled during your senior year?
 - ☐ Ornamental horticulture (Nursery, landscaping, floriculture)
 - ☐ Agricultural production (Livestock, citrus, bees)
 - ☐ Agricultural mechanics (Ag. machinery operation, ag. equipment technology)
 - ☐ Forestry/Natural resources (Timber harvesting, wildlife management)
 - ☐ Ag. co-op
 - ☐ Agricultural supplies and services (Fertilizer, pesticides)
 - ☐ Agricultural products processing (Meat cutting, citrus processing)
 - ☐ Fundamentals of agricultural occupations
 - ☐ Applied principles of agricultural occupations
2. How many years were you in FFA?
 - ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more years
3. What was the highest degree achieved while in FFA?
 - ☐ None ☐ Greenhand ☐ Chapter Farmer ☐ State FFA Degree
4. Current Occupational Status (answer as many as apply)
 - ☐ A. Full-time farmer or rancher
 - ☐ B. Part-time farmer or rancher (estimate the percentage of time devoted to farming or ranching: %)
 - ☐ C. Agribusiness employee (examples: parts clerk, feed mill employee, meat inspector, etc.) Name of occupation is
 - ☐ D. Horticulture employee (examples: greenhouse worker, retail florist or garden center employee, etc.) Name of occupation is
 - ☐ E. Forestry/Natural resources employee (examples: logger, forest cruiser, park employee, wildlife conservation officer, etc.) Name of occupation is
 - ☐ F. Agricultural mechanics employee (examples: farm machinery mechanic, farm machinery mechanic's helper, etc.) Name of occupation is
 - ☐ G. Military Service
 - ☐ H. Non-agricultural occupation (examples: secretarial work, banker, etc.) Name of occupation is
 - ☐ I. Currently attending college (major)
 - ☐ J. Currently attending a Vocational Technical School; Area of Study is
 - ☐ K. Currently unemployed
 - ☐ L. Self-employed in agriculture/agribusiness
 - ☐ M. Self-employed in an occupation not related to agriculture

Answer if currently employed

5. Is your present job;
 - ☐ A. One for which you received vocational agricultural training
 - ☐ B. Somewhat related to your vocational agricultural training
 - ☐ C. Not related to your vocational agricultural training
6. How do you feel your vocational agriculture training prepared you for your present job?
 - ☐ Excellent ☐ Good ☐ Fair ☐ Poor

(OVER)

Instructions: Please give your opinion about each of the following statements.
If you strongly agree, check "4"; if you agree, check "3"; if
you disagree, check "2"; and if you strongly disagree, check "1".

The first group is on your thoughts about your experiences.

- | | 4 | 3 | 2 | 1 |
|--|-----|-----|-----|-----|
| | SA | A | D | SD |
| 7. Vo-Ag taught me skills useful in production agriculture | () | () | () | () |
| 8. Vo-Ag taught me skills useful in agribusiness and natural resources----- | () | () | () | () |
| 9. Vo-Ag helped me learn how to participate in meetings--- | () | () | () | () |
| 10. Vo-Ag helped me choose an occupation----- | () | () | () | () |
| 11. Vo-Ag helped me develop leadership skills----- | () | () | () | () |
| 12. Vo-Ag helped me understand how to enter and advance in agricultural occupations----- | () | () | () | () |
| 13. Vo-Ag helped me see the need to get along with others on the job----- | () | () | () | () |
| 14. Vo-Ag helped me learn to work in production agriculture areas like farming, greenhouse plant production, or nursery operations----- | () | () | () | () |
| 15. Vo-Ag helped me learn to work in agribusiness and natural resources areas like sales and services, forestry, or food processing----- | () | () | () | () |
| 16. Vo-Ag helped me learn how to get along with other people | () | () | () | () |
| 17. Vo-Ag classes were good for me----- | () | () | () | () |
| 18. If I had it to do over, I would re-enroll in Vo-Ag----- | () | () | () | () |

The second group asks your opinion about your teacher(s) in Vo-Ag.

- | | | | | |
|--|-----|-----|-----|-----|
| 19. They encouraged me to enter an occupation in agriculture | () | () | () | () |
| 20. They encouraged me to consider attending college----- | () | () | () | () |
| 21. They provided me with information on careers outside of agriculture----- | () | () | () | () |
| 22. They provided me with information on careers within agriculture----- | () | () | () | () |

Instructions: Please read each statement below and respond as indicated.
Check only one item. Your individual answers will be kept confidential.

23. What is your marital status?

() Single () Married

24. Do you currently

() Live with parents () Own a home () Rent () Other _____

25. What is your race?

() White, () Black, () Hispanic, () American Indian, () Asian, () Other

26. Annual Gross Income - before taxes (will be strictly confidential)

- | | |
|----------------------------|----------------------------|
| () A. Less than \$5,000 | () E. \$20,000 - \$24,999 |
| () B. \$5,000 - \$9,999 | () F. \$25,000 - \$29,999 |
| () C. \$10,000 - \$14,999 | () G. \$30,000 - \$34,999 |
| () D. \$15,000 - \$19,999 | () H. Over \$35,000 |

APPENDIX C

CORRESPONDENCE



UNIVERSITY OF FLORIDA
INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

GAINESVILLE, FLORIDA 32611

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION

305 ROLFS HALL

PHONE: 904/392-0502

February 17, 1984

Dear Mr.

You have been identified as a former student in Vocational Agriculture and as a person who would be willing to help improve the program in Florida.

We are collecting information about Vocational Agriculture from a small sample of former students. Please give us your views on the enclosed questionnaire. Do not write your name on the questionnaire as all information will be confidential. The code number will be used only to check your name off the mailing list when the questionnaire is returned.

Your opinions are essential if we are to improve our vocational agriculture program. Please return the questionnaire in the enclosed stamped envelope by March 1, 1984.

Thank you for your help and cooperation.

Sincerely yours,

Larry R. Arrington
Assistant Professor

LRA:cf

Enclosure

COLLEGE OF AGRICULTURE

AGRICULTURAL EXPERIMENT STATIONS

COOPERATIVE EXTENSION SERVICE

SCHOOL OF FOREST RESOURCES AND CONSERVATION

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UNIVERSITY OF FLORIDA

INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

GAINESVILLE, FLORIDA 32611

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION

305 ROLFS HALL

March 16, 1984

PHONE: 904/392-0802

MEMORANDUM

TO: 1983 High School Graduates

FROM: Larry R. Arrington, Assistant Professor

SUBJECT: Follow-up Study

I am writing to you about our study of 1983 high school graduates. We have not yet received your completed questionnaire. Because your answers are so important to the success of the study, I thought it best to send you a third letter.

Many graduates have already sent back their questionnaires, but information on your school is important if we are to have an accurate picture of programs in Florida. I am enclosing an additional copy of the questionnaire along with a self-addressed envelope and a plea for your cooperation and assistance. Would you please take a few minutes from your busy schedule to complete the yellow questionnaire.

Thank you for your time and efforts in this matter, and I am looking forward to hearing from you soon.

LRA/dp

Enclosure

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INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

GAINESVILLE, FLORIDA 32611

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION

305 ROLFS HALL

PHONE: 904/392-0302

March 30, 1984

MEMORANDUM

TO: 1983 High School Graduates
FROM: Larry R. Arrington, Assistant Professor
SUBJECT: Follow-up Study

I am writing to you about our study of 1983 high school graduates. We have not received your completed questionnaire. Your answers are very important to the success of this study. I thought it best to send you a fourth notice.

Many graduates have already sent back their questionnaires, but information about your school is important if we are to have an accurate view of agriculture/agribusiness programs in Florida. Two weeks ago you received a second copy of the yellow questionnaire with a self-addressed envelope. Please take a few minutes from your busy schedule and fill it out. We need your cooperation and assistance.

Thank you for your time and efforts in this matter. I am looking forward to hearing from you in the very near future.

LRA/dp

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